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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/583,247	06/16/2006	Yngve Lundgren	1034281-000007	9111
21839 7590 11/18/2008 BUCHANAN, INGERSOLL & ROONEY PC POST OFFICE BOX 1404 ALEXANDRIA, VA 22313-1404			EXAMINER WANG, XIAOBEI	
			ART UNIT 4181	PAPER NUMBER
			NOTIFICATION DATE 11/18/2008	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com

Office Action Summary	Application No. 10/583,247	Applicant(s) LUNDGREN, YNGVE	
	Examiner XIAOBEI WANG	Art Unit 4181	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 6-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/16/2006</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Priority

Acknowledgement of this application's claimed priority to PCT/FI04/200768 filed 12/16/2004 is made, as well the claimed foreign priority.

Status Report

Applicant's claim amendments have been received 6/16/06 and it is noted that claims 1-5 have been cancelled, with claims 6-21 new per applicant's request.

Specification

The disclosure is objected to because of the following informalities: There appears to be a typographical error on the last line of the second paragraph on page 5, where the sentence reads "...selenium is then precipitated as HgS".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 9 recites the limitation "the treatment of the aqua regia solution" in the process of claim 6. There is insufficient antecedent basis for this limitation in the claim, since claim 6 does not recite the treatment of the aqua regia solution.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 6-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Bohland et al. (US Patent 6,129,779).

Regarding claim 6 of the instant application, it is directed towards a process for reclaiming selenium from a selenium filter by leaching with hydrogen peroxide to form selenious acid, and using an aqua regia to dissolve mercury selenide in the filter and then precipitating the mercury so as to remove it from the aqua regia solution.

Bohland et al. discloses a process for reclaiming a metallic element from a non-metallic friable substrate, wherein the metallic element includes materials such as selenium and mercury (column 2, lines 57-59), and the non-metallic friable substrate is any material which will crush or powder upon impact (column 2, lines 53-55). According to the applicant's disclosure, the filter mass of the selenium filter can be made of silica, aluminum oxide, or ceramic material. These materials are known to those in the art as being capable of crushing or powdering upon impact, thus the friable substrate of Bohland et al. is construed to include the filter mass of the instant application.

In the process of reclaiming the metallic element from a non-metallic friable substrate, Bohland et al. describes a process of using an etchant to dissolve the metallic element from the non-metallic friable substrate (column 3, lines 18-22). This

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etchant is disclosed to comprise such chemicals as sulfuric acid, nitric acid, or mixtures thereof, and hydrogen peroxide (column 6, lines 14-16 & Table 1). The solid phase comprising the friable substrate is then separated from the solution containing the metallic element (column 3, lines 24-25), and the metallic element can be further separated by precipitating it out from the solution (column 3, lines 42-45).

While Bohland et al. does not explicitly state that hydrogen peroxide leaches the metallic element from the non-metallic friable substrate, it would have been considered that such a process would have inherently occur in the presence of hydrogen peroxide; furthermore, the formation of selenious acid should occur given that the necessary reagents are present, which is the case for Bohland et al. One skilled artisan would have predicted the substantially same result . Thus, one would have concluded the teaching of Bohland et al met the claim.

Regarding claim 7, Bohland et al. discloses using a precipitant such as sodium hydroxide, potassium hydroxide, or sodium bicarbonate. The use of such chemicals in the act of precipitating the metallic element from solution would inherently alter the pH of said solution as well (column 8, lines 16-22). Regarding the reuse of selenium in other filters, Bohland et al. states that there is motivation to reclaim expensive metallic material from used products, thus decreasing the cost of producing new ones. One with skill in the art would thus envisage the reuse of selenium reclaimed from old selenium filters in new selenium filters.

Regarding claims 8-9, it is commonly known to those with skill in the art to carry out chemical processes and treatments at higher temperatures in order to increase

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efficiency and decrease the time required for the treatment to go to completion. Thus, the treatment of aqua regia solution in order to adjust the pH at an elevated temperature is envisaged by those skilled in the art.

Regarding claims 10-13, one with skill in the art would envisage using the filter mass in the making of new filter mass, since the filter mass has not undergone any foreseeable chemical changes that would make it unsuitable for re-use. One with skill in the art would envisage the use of old filter mass in new filter mass, given that the active components in the filter have been removed.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 14-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bohland et al. (US Patent 6,129,779) in view of Melkerson et al. (US Patent 3,786,619).

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The teaching of Bohland et al. is mentioned in the 102 rejection (*supra*).

Regarding claims 14-21, each claim is different from previously mentioned Bohland et al. which do not explicitly teach using selenious acid to make new selenium filters.

Melkerson et al. disclose a process of making a selenium filter from aqueous SeO_2 , which is equivalent to selenious acid (column 5, lines 6-8).

It would have been obvious at the time of invention to use the selenious acid that would form from a process such as Bohland et al., the process of the instant application, or any process that produces selenious acid, to form a selenium filter mass in the manner described by Melkerson et al.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to XIAOBEI WANG whose telephone number is (571)270-5764. The examiner can normally be reached on Monday - Friday, 8:00am - 5:00 pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vickie Kim can be reached on 571-272-0579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

X.W.

/Vickie Kim/
Supervisory Patent Examiner, Art Unit 4181